AMENDMENT UNDER 37 C.F.R. §1.111
U.S. Application No. 09/990,802

AMENDMENTS TO THE DRAWINGS

Fig. 1 has been amended to add the legend "PRIOR ART".

Attachment: Annotated Marked-Up Drawing(s)
                   Replacement Sheet(s)

AMENDMENT UNDER 37 C.F.R. §1.111
U.S. Application No. 09/990,802

REMARKS

Responsive to the Examiner's objection to the drawings, Applicants note the following.

First, Applicants are submitting a replacement sheet for Figure 1, wherein Figure 1 is labeled

"PRIOR ART". Second, regarding Figure 4, Applicants have amended the specification, without

adding any new matter, to refer to the reference numerals which the Examiner has identified.

The Examiner has rejected claims 1, 6-8, 13-15, and 20-21 under 35 U.S.C. § 102(b) as

anticipated by USP 5,673,387 (Chen). The Examiner has rejected claims 2-3, 9-10, and 16-17,

under 35 U.S.C. § 103(a) as unpatentable over Chen in view of an article from IEEE Software

entitled "Managing Data Through Naming Standards" (Winder). The Examiner has rejected

claims 4, 11, and 18 under 35 U.S.C. § 103(a) as unpatentable over Chen in view of USP

5,778,169 (Reinhardt). The Examiner has rejected claims 5, 12, and 19 under 35 U.S.C. § 103(a)

as unpatentable over Chen. Applicants respectfully traverse these rejections, and request

reconsideration and allowance of all of the claims in view of the following arguments.

The present invention relates to a method, apparatus, and article of manufacture for a

computer-implemented system for collecting persistent code coverage data across software

versions. Fundamentally, Applicants believe that the Examiner's attempt to read the rejected

claims on Chen results from a misapprehension of the term "code coverage task," which appears

throughout the claims of the application. In the paragraph bridging pages 12 and 13 of the

present application, Applicants define "code coverage task" as "a basic block of code for which

an execution of a test returns a true value if the testing requirement of the task is fulfilled and a

false value if the testing requirement of the task is not fulfilled". Applicants go on to state, "a basic block is a set of consecutive statements with a single entry point (i.e. the first statement) and a single exit point (i.e. the last statement)." Applicants go on to state further that coverage tasks "could be at module level, block level or statement level".

In reading the claims of the present application on Chen, the Examiner has pointed to Chen's reference to "basic code entities" at col. 2, lines 47-50. At col. 8, beginning at line 8, Chen discusses four kinds of entities in a C program: types 180, functions 182, variables 184, and macros 188. At col. 3, beginning at approximately line 46, Chen describes two sets of entities in a software system S: functions F and nonfunctions V. Chen states, "functions are the basic entities that execute program semantics by creating and storing values. It is assumed that every action of a program must be carried out in some function. Nonfunctions are nonexecuting entities in a program such as variables, types, and macros. For example, variables define storage areas that functions manipulate, and types, among other things, define the storage extent of variables. A program in the software system is defined as a composition of some subsets of functions F and nonfunctions V."

From the foregoing, it can be appreciated that, while the Examiner has attempted to read the claimed "code coverage tasks" on Chen's "basic code entities," the two things are quite different from each other. Actually, the claimed "code coverage tasks" correspond to a Chen program, or to a block of a Chen program, and not to a function, variable, type, or macro.

Once this distinction is appreciated, it can be seen that the Examiner's reading of the claims on Chen completely breaks down.

For example, looking at independent claim 1, "dividing the program source code statements of said computer program into a plurality of code coverage tasks" necessarily implies division of source code into modules, blocks, or statements, along the lines of the discussion at pages 12 and 13 of the specification, as Applicants pointed out above. Chen's entities do nothing of the kind. Going further, the claimed generating of a persistent unique name for each of the code coverage tasks then refers to the naming of modules, blocks, or statements, different from Chen's entities once again.

Based on the foregoing, when the present invention inserts coverage points into the computer program source code for each of the code coverage tasks, as claimed for example in claim 1, the portion of Chen on which the Examiner relies at col. 7, lines 7-9 referring to the adding of instrumentation, has nothing to do even with the Chen "entities" which the Examiner is attempting to the claimed code coverage tasks.

Looking further at claim 1, the creation of a code coverage database using the code coverage tasks in no way corresponds to Chen's generation of an entity trace list for each test unit, to which the Examiner refers at col. 9, lines 32-35 of Chen.

Pursuant to the foregoing, Applicants submit that independent claim 1, as well as independent claim 8, and independent claim 15, which contain corresponding recitation, are patentable, as are all of the dependencies of these claims. Therefore, Applicants submit that claims 1-21 in the subject application are patentable.

Looking also now at dependent claims 6, 13, and 20, a similar rationale as with respect to the independent claims 1, 8, and 15 applies. That is, the lack of correspondence between Chen's

7

AMENDMENT UNDER 37 C.F.R. §1.111
U.S. Application No. 09/990,802

"entities" and the claimed "code coverage tasks" prevents any kind of reading of these dependent claims 6, 13, and 20 on Chen. Therefore, Applicants submit that these claims are patentable for this additional reason as well, as are their corresponding dependencies, claims 7, 14, and 21.

Neither Winder nor Reinhardt supplies the deficiencies of Chen. The Examiner relies on Winder because of some general, highly non-specific statements therein. Concerning claims 2, 9, and 16, since Chen's entities do not correspond to the claimed code coverage tasks, the unique naming in these claims finds no response in Chen, as the Examiner acknowledges, but also finds no response in Winder because there is simply no motivation to make any kind of suggestions (assuming for the sake of argument that there are suggestions) in Winder to modify the teachings of Chen. Moreover, such modification would not yield the subject matter of claims 2, 9, and 16 because Chen's entities in no way correspond to the claimed code coverage tasks. Applicants note further that, for example, a statement such as, "your filing system determines your ability to access the information you need to manage," as Winder states in the first full paragraph in col. 3 on page 84, provides no suggestion whatsoever to the ordinarily skilled artisan as to any details of implementation, nor as to what should be done to Chen to modify it.

Likewise, concerning claims 3, 10, and 17, Applicants simply do not see how the Examiner can: 1) take some general reference to a three-part naming convention in Winder; 2) acknowledge that it is different from the naming convention in the present invention; 3) combine that different naming convention with something different again in Chen, and 4) somehow make a leap to arrive at the naming set forth in these claims. Again, the lack of correspondence between Chen's entities and the claimed code coverage tasks prevents, among

AMENDMENT UNDER 37 C.F.R. §1.111
U.S. Application No. 09/990,802

other things, the link the Examiner is trying to make here. Therefore, Applicants submit that

claims 2, 3, 9, 10, 16, and 17 are patentable for these additional reasons as well.

Pursuant to the foregoing, Applicants submit that all of claims 1-21 in the subject

application are patentable.

In view of the above, reconsideration and allowance of this application are now believed

to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is

kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue

Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any

overpayments to said Deposit Account.

Respectfully submitted,

Frank L. Bernstein
Registration No. 31,484

SUGHRUE MION, PLLC
Telephone: (650) 625-8100
Facsimile: (650) 625-8110

MOUNTAIN VIEW OFFICE
23493
CUSTOMER NUMBER

Date: December 8, 2004